

CONTENTS OF 91B

Vol. 91B, No. 1.

General Papers

Guillermo J. Caamaño, Jose Iglesias, Carmen Marco and Ana Linares 1 *In vivo* utilization of [3-¹⁴C]acetoacetate for lipid and amino acid synthesis in the 15-day-old chick

Eric A. Decker, Marilyn C. Erickson and Herbert O. Hultin 7 Enzymic lipid oxidative activities of sarcoplasmic reticulum in several species of Northwest Atlantic fish

Stephen C. Gehnrich and June R. Aprille 11 Hepatic gluconeogenesis and mitochondrial function during hibernation

P. A. Copeland and P. Thomas 17 The measurement of plasma vitellogenin levels in a marine teleost, the spotted seatrout (*Cynoscion nebulosus*) by homologous radioimmunoassay

Susan M. Butler, Anne Faulkner, Victor A. Zammit and Richard G. Vernon 25 Fatty acid metabolism of the perfused caudate lobe from livers of fed and fasted non-pregnant and fasted late pregnant ewes

Jeffrey M. Rosenberg and Paul H. Sato 33 Hemolysates from guinea-pig reticulocytes also efficiently translate added mRNA

R. W. Burley, J. F. Back, J. E. Wellington and G. C. Grigg 39 Proteins and lipoproteins in yolk from eggs of the estuarine crocodile (*Crocodylus porosus*); a comparison with egg yolk of the hen (*Gallus domesticus*)

Peter Suhr-Jessen and Lars P. D. Rasmussen 45 Biochemical and immunological characterization of *Mytilus edulis* plasma polypeptides

William J. Johnson and George D. Cain 51 The selective uptake of cholesterol by the rat tapeworm *Hymenolepis diminuta* (Cestoda)

William J. Johnson and George D. Cain 59 Studies on the mechanism of cholesterol uptake by the rat tapeworm *Hymenolepis diminuta* (Cestoda)

C. E. Shay, P. G. Foster and J. M. Neelin 69 Immunological relationships among vertebrate lysine-rich histones

A. Nègre, S. Karm, R. Sablé-Amplis, R. Sicard, Q. Q. Dang, P. Rogalle, L. Douste-Blazy and R. Salvayre 79 Cholesterol esterases from normal and FEC hamster liver

Hoi-Sen Yong 85 Allozyme variation in the *Artocarpus* fruit fly *Dacus umbrosus* (Insecta: Tephritidae) from Peninsular Malaysia

Toshiro Nishita and Hiroharu Matsushita 91 Comparative immunochemical studies of carbonic anhydrase III in horses and other mammalian species

A. Arillo, M. Sará and B. Burlando 97 Respiratory properties of mitochondria from the calcareous sponge *Clathrina clathrus* (Schmidt) and phylogenetic implications

Jacques R. Vanfleteren and Lydie A. Meheus 103 Analysis of the chromosomal proteins of *Caenorhabditis elegans* by two-dimensional electrophoresis, silver staining and immunodetection

Nadiel Massahud, Suely G. Figueiredo and Ana Maria M. Afonso 111 Purification and some properties of β -D-glucosidase from the hepatopancreas of *Biomphalaria glabrata*

Suresh D. Mane, John R. Sauer and R. C. Essenberg 117 Molecular forms and free cAMP receptors of the cAMP-dependent protein kinase from tick salivary glands

Anja Hirsch-Behnam and Angelika Barnekow

F. Persat, M. Mojon and A. F. Petavy

Maria de Lourdes Munoz, C. Elwood Claggett and Eugene C. Weinbach

P. Colepicolo, D. Pagni and E. J. H. Bechara

Yukihiro Kawata, Haruhiko Fujiwara and Hajime Ishikawa

Yukihiro Kawata, Haruhiko Fujiwara, Tadayoshi Shiba, Tadashi Miyake and Hajime Ishikawa

K.-S. Kim, M. A. Burford, D. J. Macey and J. Webb

Graeme A. Dunstan, Andrew J. Sinclair, Kerin O'Dea and Joan M. Naughton

Ulrich Augenstein, Adam Ronai, Bernd Wassmer, Stephen de Looze and Otto von Deimling

Bernd Wassmer, Ulrich Augenstein, Adam Ronai, Stephen de Looze and Otto von Deimling

F. Lassalle, M. Lassegués and Ph. Roch

M. Marino, A. M. Girelli, S. Leoni and A. Trentalance

Javed Mustaqim

125 Characterization of phosphoproteins in sponge cells

133 Lipids of *Echinococcus multilocularis* metacestodes

137 Calcium transport and catabolism of adenosine triphosphate in the protozoan parasite *Giardia lamblia*

143 Luciferin biosynthesis in larval *Pyrearinus termilluminans* (Coleoptera: Elateridae)

149 Low molecular weight RNA of *Drosophila* cells which is induced by heat shock—I. Synthesis and its effect on protein synthesis

155 Low molecular weight RNA of *Drosophila* cells which is induced by heat shock—II. Structural properties

159 Iron concentrations and characterisation of the major iron binding proteins in the tissues of the chiton *Clavarizona hirtosa*

165 The lipid content and fatty acid composition of various marine species from Southern Australian coastal waters

171 Lymph esterases of the house mouse (*Mus musculus*)—I. Identification and possible origins of abdominal lymph esterases

179 Lymph esterases of the house mouse (*Mus musculus*)—II. The role of esterase-2 in fat resorption

187 Protein analysis of earthworm coelomic fluid—IV. Evidence, activity induction and purification of *Eisenia fetida andrei* lysozyme (Annelidae)

193 Frog liver dolichols: separation and quantitative determination related to seasonality

197 Electrophoretic variation of isozymes in *Polydora ciliata* complex (Polychaeta: Spionidae)

Vol. 91B, No. 2.

Review

Aren Van Waarde

207 Biochemistry of non-protein nitrogenous compounds in fish including the use of amino acids for anaerobic energy production

Mini-Reviews

Robert C. Baxter

R. Manconi, V. Piccialli, R. Pronzato and D. Sica

W. Kleinow

229 The insulin-like growth factors and their binding proteins

237 Steroids in Porifera. Sterols from freshwater sponges *Ephydatia fluviatilis* (L.) and *Spongilla lacustris* (L.)

247 Structure of the mitochondrial protein synthesizing apparatus in invertebrates

General Papers

Jean-Louis Connat, Pierre-Alain Fürst and Monique Zweilin

Anas Awad-Elkarim and Gary E. Means

257 Detoxification of injected and ingested ecdysteroids in spiders

267 The reactivity of *p*-nitrophenyl acetate with serum albumins

Lisa Haggblom, Robert C. Terwilliger and Nora B. Terwilliger	273 Changes in myoglobin and lactate dehydrogenase in muscle tissues of a diving bird, the Pigeon Guillemot, during maturation
Maria Elisa Lombardo, Lidia Susana Araujo, Adela Ana Juknat and Alcira M. del C. Batlle	279 Effect of illumination on growth, chlorophyll content and δ -aminolevulinic acid synthesis in <i>Euglena gracilis</i>
Haydée Fukuda, Sergio R. Paredes and Alcira M. del C. Batlle	285 Active site histidine in pig liver aminolevulic acid dehydratase modified by diethylpyrocarbonate and protected by Zn^{2+} ions
Mary J. Garson, Vassilia Partali, Synnøve Liaaen-Jensen and Ivan L. Stoilov	293 Isoprenoid biosynthesis in a marine sponge of the <i>Amphimedon</i> genus: incorporation studies with [1- ^{14}C]acetate, [4- ^{14}C]cholesterol and [2- ^{14}C]mevalonate
Hiroshi Shinbo	301 An enzyme that catalyses the synthesis of lanthionine in the silkworm, <i>Bombyx mori</i>
Hiroshi Shinbo	309 An enzyme that catalyses the cleavage of lanthionine in the silkworm, <i>Bombyx mori</i>
A. Gunn and A. G. Gatehouse	315 The development of enzymes involved in flight muscle metabolism in <i>Spodoptera exempta</i> and <i>Mythimna separata</i>
R. G. Elkin, M. L. Lyons and J. C. Rogler	325 Comparative utilization of D- and L-methionine by the White Pekin duckling (<i>Anas platyrhynchos</i>)
M. Fainaru, Z. Schafer, D. Gavish, A. Harel and M. Schwartz	331 Interactions between human and carp (<i>Cyprinus carpio</i>) low density lipoproteins (LDL) and LDL receptors
R. J. Aiello and L. E. Armentano	339 Fatty acid effects on gluconeogenesis in goat, calf and guinea pig hepatocytes
Alberto Huberman and Manuel B. Aguilar	345 A neurosecretory hyperglycemic hormone from the sinus gland of the Mexican crayfish <i>Procambarus bouvieri</i> (Ortmann)—II. Structural comparison of two isoforms of the hormone
D. H. Strumeyer, W. Kao, T. Roberts and D. Forsyth-Davis	351 Isozymes of α -amylase in the porcine pancreas: population distribution
J. Karasiński	359 Myosin isoenzymes of fish hearts
Namiko Kitahara, Takashi Nishizawa, Keiji Iida, Hideo Okazaki, Toshiro Andoh and Gen-Ichiro Soma	365 Absence of a γ -melanocyte-stimulating hormone sequence in proopiomelanocortin mRNA of chum salmon <i>Oncorhynchus keta</i>
K. H. Lockey and N. B. Metcalfe	371 Cuticular hydrocarbons of adult <i>Himatismus</i> species and a comparison with 21 other species of adult tenebrionid beetle using multivariate analysis
Haruhiko Fujiwara, Hideaki Maekawa, Naoko Takada, Naoko Miyajima and Hajime Ishikawa	383 Small RNAs of the silkworm, <i>Bombyx mori</i> as revealed by <i>in vitro</i> capping and <i>in vitro</i> transcription

Vol. 91B, No. 3.

Review

Albert Grossman

389 Information transfer in biological systems: targeting of proteins to specific organelles or to the extracellular environment (secretion)

Mini-Review

Asbjørn Gildberg

425 Aspartic proteinases in fishes and aquatic invertebrates

General Papers

Wayne S. Leibel

437 An analysis of esterase activities from surgeonfish tissues yields evidence of an atypical pseudocholinesterase

C. Rouland, A. Civas, J. Renoux and F. Petek

C. Rouland, A. Civas, J. Renoux and F. Petek

Kuo-Chi Cheng, Maria De Falco, Walter L. Maloy, Heng H. Liem and Ursula Muller-Eberhard

Eduardo J. Folco, Liliana Busconi, Celina B. Martone, Raúl E. Trucco and Jorge J. Sanchez

Gerald D. Frenkel, Janet Ducote, Christian P. Reboulleau and John Gierthy

Andreas Gies

E. Schonne, L. Petit, E. Lizen and J. J. Picard

Hui-Ling Yang, Xiao-Fong Qin, Lie-Xian Xu, De-Xu Zhu, Arnold Boersma and Kia-Ki Han

Yoko Nagata, Tadashi Shimojo and Toyoaki Akino

Leu-Fen Hou Lin and Catherine Bartlett

Paul Griffiths and Angela Fairney

Salman M. Hyder, Ronald D. Wiehle and James L. Wittliff

Masaki Shioda

Kirk P. Van Ness, Thomas J. Koob and David R. Eyre

Richard C. Bruch and R. Dino Rulli

Anne B. Mason, Stephen A. Brown and William R. Church

Namiko Kitahara, Takashi Nishizawa, Tetsuya Gatanaga, Hideo Okazaki, Toshiwo Andoh and Gen-Ichiro Soma

T. E. Kocal, T. L. Crane, B. A. Quinn, H. W. Ferguson and M. A. Hayes

Abdulrahman S. Al-Khalifa and Kenneth L. Simpson

449 Purification and properties of cellulases from the termite *Macrotermes mülleri* (Termitidae, Macrotermitinae) and its symbiotic fungus *Termitomyces* sp.

459 Synergistic activities of the enzymes involved in cellulose degradation, purified from *Macrotermes mülleri* and from its symbiotic fungus *Termitomyces* sp.

467 Peptide-specific antibodies employed in determining the interspecies immunological cross-reactivity of haemopexin

473 Activation of an alkaline proteinase from fish skeletal muscle by fatty acids and sodium dodecyl sulphate

477 A cell line with decreased sensitivity to the methyl mercury-induced stimulation of α -amanitin sensitive RNA synthesis in isolated nuclei

483 Changes of nucleotide contents and of energy charge induced by contraction, catch and relaxation in smooth molluscan muscle fibres. An analysis using reversed-phase ion-pair high-performance liquid chromatography

489 The transferrins from *Xenopus laevis*, *Xenopus borealis* and their hybrids

497 Isolation and characterization of the chemically cross-linked vegetable proteinase inhibitor B (*Sagittaria sagittifolia* Linn) by using bifunctional reagents and by high pressure liquid chromatography

503 D-Amino acid oxidase in mouse liver—II

505 Immunochemical differentiation of highly conserved forms of myelin proteolipid

511 Vitamin D metabolism in polar vertebrates

517 Alterations in estrogen receptor isoforms in the mammary gland and uterus of the rat during differentiation

525 Subcellular localization of DNA polymerase γ and changes in its activity in sea urchin embryos

531 Collagen cross-linking: distribution of hydroxypyridinium cross-links among invertebrate phyla and tissues

535 Ligand binding specificity of a neutral L-amino acid olfactory receptor

541 Domain-specific monoclonal antibodies to ovotransferrin indicate conservation of determinants involved in avian transferrin receptor recognition

551 Primary structure of two mRNAs encoding putative salmon α -subunits of pituitary glycoprotein hormone

557 Degradation of extracellular thymidine by cultured hepatocytes from rainbow trout (*Salmo gairdneri*)

563 Metabolism of astaxanthin in the rainbow trout (*Salmo gairdneri*)

George Y. Luh and Moon K. Song

569 Characterization of the low mol. wt zinc-binding ligand from rat small intestine by comparison to the organic zinc-binding ligands

Serge N. Vinogradov
and Patricia Kolodziej

577 The molecular weight of the extracellular haemoglobin of *Lumbricus terrestris* determined by electron microscopy

Murray S. Blum, Tappey H. Jones,
Thomas E. Rinderer
and H. Allen Sylvester

581 Oxygenated compounds in beeswax: identification and possible significance

Harvey N. Rubin
and Mostafa N. Halim

585 Characterization of A units released from the poly(A) tract of rabbit globin mRNA during protein synthesis: possible role of the released ATP in synthesizing protein

Gary L. Taghon

593 Phospholipid fatty acid composition of the deep-sea hydrothermal vent polychaete *Paralvinella palmiformis* (Polychaeta-Ampharetidae): effects of thermal regime and comparison with two shallow-water confamilial species

Vol. 91B, No. 4.

Mini-Reviews

Theodore T. Herskovits

597 Recent aspects of the subunit organization and dissociation of hemocyanins

Reinhart A. F. Reithmeier

613 Assembly of proteins into biological membranes—a brief history lesson based on 10 key papers

General Papers

Maria Gaczyńska, Grzegorz Bartosz,
Janusz Rosin and Miroslaw Soszyński

617 Self-digestion of erythrocyte membranes of various mammalian species

Frances J. Spray
and Willard O. Granath, Jr.

619 Comparison of haemolymph proteins from *Schistosoma mansoni* (Trematoda)-susceptible and resistant *Biomphalaria glabrata* (Gastropoda)

Masaharu Eguchi
and Yoshihito Yamamoto

625 Comparison of serum protein inhibitors from various mammals, chicken and silkworms against four proteases

Jian Hua Chen, Toshinobu Yaginuma
and Okitsugu Yamashita

631 Effect of diapause hormone on cyclic nucleotide metabolism in developing ovaries of the silkworm, *Bombyx mori*

S. P. Moyer, D. P. Ma,
T. L. Thomas and J. R. Gold

639 Characterization of a highly repeated satellite DNA from the cyprinid fish *Notropis lutrensis*

Arnt J. Raae, John Davenport
and Bernt Walther

647 Characteristics of a proteinase from ovarian fluid of the lump sucker (*Cyclopterus lumpus* L.)

Shohei Miyata and Hirozi K. Kihara

651 Characterization of proteolytic activities in embryos of *Xenopus laevis*

Kazuo Nitta, Yutaka Terasaki,
Hiroaki Kawauchi and Giichi Takayanagi

657 Comparative studies of the haemagglutination of adult and umbilical cord erythrocytes by animal lectins

Thomas A. Borgese, John P. Harrington,
Iraj Ganjian and Carlos Duran

663 Haemoglobin properties and polymerization in the marine teleost *Lophius americanus* (goosefish)

N. A. Fitch

671 Lactate dehydrogenases in Antarctic and temperate fish species

Aurora Martínez, Ragnar L. Olsen
and Juan Luis Serra

677 Purification and characterization of two trypsin-like enzymes from the digestive tract of anchovy *Engraulis encrasicholus*

Neil F. Hadley, Larry L. Jackson
and John Leader

685 Cuticular hydrocarbons of the New Zealand alpine weta *Hemideina maori* (Orthoptera, Stenopelmatidae)

Arlette Bernard, Georges Zwingelstein, Roger Meister and T. Fabian Wild	691 Hyperinsulinemia induced by canine distemper virus infection of mice and its correlation with the appearance of obesity
Petr Bobák and Vlastimil Šlechta	697 Comparison of parvalbumins of some species of family Cyprinidae
Tetsuo Yamano, Katsumi Yorita, Hiroko Fujii, Ryoko Uchimoto, Masakazu Shiota, Mitsuaki Ohta and Tsukasa Sugano	701 Gluconeogenesis in perfused chicken kidney. Effects of feeding and starvation
Mario Castañeda, Sydney P. Craig and Clementina Castro	707 Genomic DNA sequence polymorphism of <i>Trypanosoma (Schizotrypanum) cruzi</i> isolates with phenotypic variation
Maria del R. Gonzalez-Baro and Ricardo J. Pollero	711 Lipid characterization and distribution among tissues of the freshwater Crustacean <i>Macrobrachium borellii</i> during an annual cycle
Viktor Dombrádi, Antony C. Willis, György Vereb and Louise N. Johnson	717 The sequence around the phosphorylation site of the porcine heart type phosphorylase isoenzyme
N. Girija and H. Rehbein	723 Comparison of parvalbumin patterns from different fish species by isoelectric focusing of muscle extracts
Boel S. Lanne, Gunnar Bergström and Jan Löfqvist	729 Dufour gland alkenes from the four ant species: <i>F. polycetena</i> , <i>F. lugubris</i> , <i>F. truncorum</i> , and <i>F. uralensis</i>
A. Izumo, K. Tanabe and M. Kato	735 The plasma membrane and mitochondrial membrane potentials of <i>Plasmodium yoelii</i>
S. S. Salamastrakis and A. A. Haritos	741 Physicochemical characterization and tissue distribution of multiple molecular forms of fish (<i>Trachurus trachurus</i>) esterases
Carlos Martínez del Rio and Bruce R. Stevens	751 Intestinal brush border membrane-bound disaccharidases of the American alligator, <i>Alligator mississippiensis</i>
Phillip B. Maples, Janet C. Palmer and Robert H. Broyles	755 Determination of hemoglobin expression patterns in erythroid cells of <i>Rana catesbeiana</i> tadpoles
Lyne Bertrand, Normand Brière and Joseph Ferrari	763 Comparison between mouse kidneys of pre- and postnatal ages maturing <i>in vivo</i> and in serum-free organ culture
J. W. Wheeler, M. Abraham, R. J. Hight and R. M. Duffield	771 Metasternal gland secretion of the locust tree borer, <i>Megacyllene robiniae</i> (Coleoptera: Cerambycidae)
Nai-En Sun, De-Xu Zhu, Kia-Ki Han, Brigitte Hemon, Denise Belaiche and Pierre Sautiere	777 Isolation and characterization of ATP-dependent proteolytically active ubiquitin in cock testis
Antonín Stratil, Petr Kaláb and Rastislav Pokorný	783 Evidence for the presence of α_1 B-glycoprotein in mammalian sera: immunoblotting studies
Yutaka Karasawa and Chitose Nakata	789 Effects of varying doses of methionine sulfoximine on liver glutamine synthetase activity and time courses of blood and urinary nitrogenous compounds in the chicken (<i>Gallus domesticus</i>)
Ali S. Duhaiman	793 Purification of camel milk lysozyme and its lytic effect on <i>Escherichia coli</i> and <i>Micrococcus lysodeikticus</i>

